

Appendix A

```

void MusicAspectIntegrator::Compute(void) {
    Value = 0;

    if (Values[STRUM_DENSITY] > 64) { /* strumming too fast */
        Value = -MAX_CHOOSER_VALUE; /* considered very bad */
    } else if (Values[MELODY_PRESENT]) { /* must accompany singer */

        /* pick the most polyphonic (strummed chords, etc.) */
        Value += Values[POLYPHONY]*(MAX_CHOOSER_VALUE/10);

        /* two strums per second. */
#define FAVORITE_STRUM_DENSITY 16

        /* make value smaller if strum speed is off optimum */
        if (Values[STRUM_DENSITY] > FAVORITE_STRUM_DENSITY) {
            Value = Value * FAVORITE_STRUM_DENSITY / Values[STRUM_DENSITY];
        } else {
            Value = Value * Values[STRUM_DENSITY] / FAVORITE_STRUM_DENSITY;
        }

    } else { /* no singer. Give lead/melodic parts higher values */
        Value = 100;

        if (Values[STRUM_DENSITY] > FAVORITE_STRUM_DENSITY) {
            Value = Value * FAVORITE_STRUM_DENSITY / Values[STRUM_DENSITY];
        } else {
            Value = Value * Values[STRUM_DENSITY] / FAVORITE_STRUM_DENSITY;
        }

        if (Values[AVERAGE_PITCH] < 45) {
            Value = 0; /* pitch too low for lead. */
        } else {
            /* pick the most "interesting" */
            Value += ABS(Values[PITCH_ACCELERATION])/8;

            /* emphasize loud parts */
            Value = Value * (100 + Values[LOUDNESS]) / 100;
        }
    }
}

```